

Naloxone Distribution in the Emergency Department: An Evidence-Based Harm Reduction Strategy

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Introduction

- Naloxone is an opioid antagonist used to reverse life-threatening opioid overdose.
- Healthcare organizations are developing models of care that allow for naloxone distribution to laypersons within the community to reduce opioid-related mortality rates.^{1,2}
- Eleven percent of individuals who receive naloxone report using it in an overdose situation, and of these individuals 83% reported that naloxone successfully reversed the overdose.³

Learning Objectives

- Describe evidence-based strategies for naloxone distribution within the emergency care environment.
- Evaluate how a naloxone distribution program may be implemented within the learners practice setting.

Background/Significance

- United States opioid overdose medical costs exceed 72 billion dollars, and over 165,000 individuals have died between 1999 and 2014 from prescription opioid related overdose.^{4,9}
- Within the county surrounding the site hospital in 2018, 78% of drug overdose deaths were attributed to an opioid.⁵
- Criteria to identify patients at risk for opioid overdose are readily available to guide naloxone distribution in the emergency setting.^{1,2}
- Naloxone distribution and education programs may decrease opioid-related mortality rates.^{1,6,7}
- Food and Drug Administration (FDA) approved routes of naloxone (intranasal, intramuscular auto-injector) are safe and clinically effective when administered by laypersons.^{9,10}

Purpose

- The purpose of this project is to support community efforts aimed to reduce opioid overdose mortality rates through the development of an Emergency Department (ED) naloxone distribution strategy for a large health system.

Setting/Design

- A multi-site health system in the Midwest delivering quaternary health care services with urban and rural emergency care settings.
- This quality improvement project was reviewed by the Michigan State University Institutional Review Board (IRB).

Methods

- A quality improvement strategy using Donabedian's Model was used as the project framework to define the clinical process, structure, and target outcomes.¹¹
- A comprehensive appraisal and synthesis of the literature was completed to inform the project design.

Results

- A naloxone distribution program was implemented in eleven EDs within the integrated health system.
- An easy to identify, plain language naloxone kit was developed specifically for ED distribution.
- A comprehensive clinical guideline was written to provide best practice recommendations for dispensing or prescribing a commercially available, cost-effective, pre-mixed naloxone nasal spray applicable to the entire health system.
- Intranasal, commercially prepared naloxone nasal spray was stocked for distribution within the ED to support efficient access.
- Customized plain language written and video patient education materials were developed to teach patients, families, and representatives how to prevent, recognize, and respond to an opioid overdose (figure 1).
- A financial analysis was completed to understand the cost implications of naloxone distribution on the hospital system.
- 223 take-home naloxone kits were dispensed to ED patients in the first year of the program.

Figure 1: Plain Language Patient Education



Scan this image for a brief patient education video on naloxone use for opioid overdose



Implications

- Emergency Department naloxone distribution programs are feasible in both urban and rural settings.
- The implementation strategy should consider the financial impact of naloxone distribution on the hospital system, compliance barriers of dispensing take home medications and identify means to provide brief but effective patient education.
- Further advocacy is needed to ensure naloxone products designed for use by laypersons are both accessible and affordable for community members.